

Set Nam	e Query	Hit Count	Set Name result set	
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR				
L48	132 and 144	. 6	L48	
L47	132 and 144	6	L47	
L46	132	2068	L46	
L45	143 and L44	1	L45	
L44	memory same usage same threshold\$1	346	L44	
L43	132 same (application\$1 or task\$1 or program\$1 or process\$2)	612	L43	
L42	132	2068	L42	
DB = U	SPT; PLUR=YES; OP=OR			
L41	5572694.pn.	1	L41	
L40	5630097.pn.	1	L40	
L39	5727178.pn.	1	L39	
L38	6078942.pn.	1	L38	
L37	6078942.pn.	1	L37	
DB=U	SPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L36	windows same 132	28	L36	
L35	19 and L34	2	L35	
L34	18 and 132	329	L34	
L33	critical adj memory adj threshold\$1	0	L33	
L32	memory adj monitor\$3	2068	L32	
L31	memory	1268140	L31	
DB=U	SPT; PLUR=YES; OP=OR			
L30	5412798.pn.	1	L30	
L29	5579529.pn.	1	L29	
L28	5600840.pn.	1	L28	
L27	5706407.pn.	1	L27	
L26	5768568.pn.	1	L26	
L25	5822600.pn.	1	L25	
L24	5860125.pn.	1	L24	
L23	5867714.pn.	1	L23	
L22	5920728.pn.	1	L22	
L21	5935228.pn.	1	L21	
L20	5951684.pn.	1	L20	

	•/		
L19	6009480.pn.	1	L19
L18	6078921.pn.	1	L18
DB=U	SPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L17	112 and 115	1	L17
L16	110 and L15 and 19 and 17	0	L16
L15	11 or 12	2982	L15
L14	13 and 112	0	L14
L13	17 and L12	10	L13
L12	19 and 18	288	L12
L11	19 and 18L10	0	L11
L10	virtual adj memor\$3	6549	L10
L9	windows adj CE	877	L9
L8	(kill\$1 or terminate\$1 or clos\$2) same (application\$1 or program\$1 or process\$2 or task\$1)	440753	L8
L7	(minimiz\$3 or reduc\$3) adj memory	12775	L7
L6	14 and L5	0	L6
L5	13	10	L5
DB=U	SPT; PLUR=YES; OP=OR		
L4	clos\$2 same L3	0	L4
L3	application\$1 same memory same allocation same threshold\$1	10	L3.
L2	((711/170  711/171  711/172  711/173 )!.CCLS.)	1300	L2
L1	((711/1  711/2  711/3  711/4  711/5  711/6 )!.CCLS.)	. 1860	L1

END OF SEARCH HISTORY



DATE: Friday, February 21, 2003

ST.J(

Set Name side by side	Query	Hit Count	Set Name result set
DB=US	PT; PLUR=YES; OP=OR		•
L9	17 and L8	0	L9
L8	low adj memory	1408	L8
L7	11 and 15 and L6 and 14 and 13	27	L7
L6	application adj program\$1	24805	L6
L5	operating adj system	53156	L5
L4	11 and L3	96	L4
L3	((711/170  711/171  711/172  711/173 )!.CCLS.)	1282	L3
L2	critical adj memory adj threshold	0	L2
L1	memory same threshold\$1	27448	L1

END OF SEARCH HISTORY

08/852,158 STOC 2-21-03

## **End of Result Set**

Generate Collection

L45: Entry 1 of 1

File: PGPB

Mar 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030046581

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030046581 A1

TITLE: System and method for protecting computer device against overload via network

attack

PUBLICATION-DATE: March 6, 2003

INVENTOR - INFORMATION:

NAME CITY STATE COUNTRY RULE-47 Call, R. Christian Aberdeen NJ US Cavuto, David J. Edison US NJ Giorgis, Tadesse W. US Neptune NJ

APPL-NO: 09/ 941981 [PALM] DATE FILED: August 29, 2001

INT-CL: [07] G06 F 11/30

US-CL-PUBLISHED: 713/201 US-CL-CURRENT: 713/201

REPRESENTATIVE-FIGURES: 4

#### ABSTRACT:

The present invention protects network devices from overload and from network packet flood attacks (such as Denial of Service and Distributed Denial of Service attacks) that would otherwise consume available resources, and possibly cause system failure or compromise the system by allowing intrusion. The invention, termed an intelligent cache management system is used to free allocated resources (memory, in particular) for reuse, when under sustained attack. One exemplary embodiment of a cache management system of the present invention is used in connection with session-type packet processing devices of a computer network. The system comprises a memory management database for storing communication traffic classification and memory threshold values, and a memory monitor for tracking overall memory usage and determining when the memory threshold values stored in the memory management database are reached. A cache classifier is used to determine a class into which a given session of communications traffic falls. When the <u>memory threshold</u> value is reached, a pruning mechanism selects and prunes entries representing sessions on the packet processing device in accordance with the communication traffic classification and memory thresholds programmed in the memory management database.

# **Generate Collection**

L36: Entry 11 of 28

File: USPT

Jun 12, 2001

US-PAT-NO: 6247042

DOCUMENT-IDENTIFIER: US 6247042 B1

TITLE: Method and system for restoring the state of physical memory as the focus

changes among application programs in a computer

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

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TYPE CODE

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APPL-NO: 08/ 936358

DATE FILED: September 24, 1997

INT-CL: [07]  $\underline{G06}$   $\underline{F}$   $\underline{9}/\underline{00}$ 

US CL-ISSUED: 709/107; 711/202

US-CL-CURRENT: <u>709/107</u>; <u>711/202</u>

FIELD-OF-SEARCH: 709/100, 709/101, 709/102, 709/105, 709/106, 709/107, 711/130,

711/133, 711/117, 711/206, 711/165, 711/202, 711/13, 711/129, 711/209, 714/42, 714/38,

714/718

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4688167	August 1987	Agarwal	
4967353	October 1990	Brenner et al.	
5125086	June 1992	Perazzoli, Jr.	
5386536	January 1995	Courts et al.	711/136
5394537	February 1995	Courts et al.	711/202
5499354	March 1996	Aschoff et al.	711/129
5572694	November 1996	Uchino	709/1
5606685	February 1997	Frandeen	711/117
5611064	March 1997	Maund et al.	711/209
5630097	May 1997	Orbits et al.	395/492
5727178	March 1998	Pletcher et al.	711/202
6078942	June 2000	Eisler et al.	709/100
	4688167 4967353 5125086 5386536 5394537 5499354 5572694 5606685 5611064 5630097 5727178	4688167       August 1987         4967353       October 1990         5125086       June 1992         5386536       January 1995         5394537       February 1995         5499354       March 1996         5572694       November 1996         5606685       February 1997         5611064       March 1997         5630097       May 1997         5727178       March 1998	4688167       August 1987       Agarwal         4967353       October 1990       Brenner et al.         5125086       June 1992       Perazzoli, Jr.         5386536       January 1995       Courts et al.         5394537       February 1995       Courts et al.         5499354       March 1996       Aschoff et al.         5572694       November 1996       Uchino         5606685       February 1997       Frandeen         5611064       March 1997       Maund et al.         5630097       May 1997       Orbits et al.         5727178       March 1998       Pletcher et al.

#### FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
620 523 A3	October 1994	EP	
620 523 A2	October 1994	EP	
713 176 A3	May 1996	EP	
713 176 A2	May 1996	EP	

## OTHER PUBLICATIONS

PCT/US98/16800--International Search Report, Sep. 12, 1998.

"Method of Extending OS/2's Memory management to Recognize "User Focus"", IBM
Technical Disclosure Bulletin, vol. 35, No. 1A, Jun. 1992, pp. 470-472.
PCT/US98/16802--International Search Report, Sep. 12, 1998.

V. Sohal, Reliable Memory Management for Real-Time Systems, Electronic Design, vol. 44, No. 13, Jun. 1996, pp. 118, 120, 122, 124 XP000625394, see p. 120, right-hand column, line 7-page 124, left-hand column, line 39.
PCT/US98/16800--International Search Report, Jan. 22, 1999.

"Packing Variable-Sized Segments in the Swap File of a Paging-Based Virtual Memory System", IBM Technical Disclosure Bulletin, vol. 39, No. 3, Mar. 1996, pp. 301/302 XP000581702.

ART-UNIT: 211

PRIMARY-EXAMINER: Banankhah; Majid

## ABSTRACT:

A memory monitor automatically restores the state of physical memory allocation of application programs when they lose and then regain the focus in a multitasking computing environment. The memory monitor monitors the focus of the operating system for changes, such as when the user switches from one application to another. When an application loses the focus, the memory monitor determines and stores the state of physical memory allocation. When the memory monitor detects that the application has re-gained the focus, it re-loads all of the code or data that was in physical memory when the application lost the focus, but had been swapped to secondary storage.

19 Claims, 5 Drawing figures